Receipt Printer

BTP-R880NPII

SERVICE MANUAL

Revision Sheet

Date	Version	Description	Distributor
2014-3-7	V1.0	Primary version	

Declaration

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Warnings and Cautions

Warning: Items shall be strictly followed to avoid damages to body and equipment.

Caution: Items with important information and prompts for operating the printer.

Certifications

The control system of SNBC has been approved of the following certifications:

ISO9001 quality control system certification

ISO14001 environmental control system certification

OHSAS18001 occupational health and safety control system certification

IECQ QC080000 hazardous substance process control system certification

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Notes

1) Follow the steps in this manual hereafter during maintenance.
2) Make sure that the printer and the computer are turned off before plugging the communication cable, changing print head or doing maintenance to the printer.
3) Be sure to protect it against electrostatic damage when maintaining print head and other electronics.
4) Time between turning on and turning off the printer is no less than 20 seconds.
5) Do not operate the printer when paper is end. Doing so can damage print head.

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1 Feature

1.1 Outline

BTP-R880NPII is a high performance thermal printer, which can be widely used for real-time printing application, such as POS system, restaurant system, ATM, etc.

BTP-R880NPII can be connected with other devices via parallel interface, serial interface, USB, Ethernet or WIFI and is available for WINDOWS 2000/XP/Server 2003/VISTA/WIN7/ WIN8/Server2008, Linux and MAC.

1.2 Main Feature

- **Printing**
  - Low noise, high print speed
  - High print speed up to 230mm/s
  - Continuous paper or marked paper can be used
  - Can be used with different paper width
  - Auto paper cutting
  - Cash drawer control connector
- **Application software**
  - Character printing:
    1) Two inner ASCII fonts: FONTA and FONTB;
    2) User-defined fonts;
    3) Font size can be enlarged 1-6 times horizontally and vertically; rotating printing(0^0, 90^0, 180^0, 270^0)
  - Bar code printing: multiple one-dimensional barcode and one two-dimensional barcode;
  - Image printing: image can be downloaded into FLASH and SDRAM, supporting direct bitmap print mode.
- **Printer Maintenance**
  - Paper roll changes easily;
  - Print head can be cleaned easily;
  - Different features and parameters can be configured by software;
  - Easy paper loading;
  - Firmware program online updating.

1.3 Technical Specifications

Item	Parameter	
Print Method	Direct Thermal	
Print Resolution	203×180DPI	
Print Speed	Max. 230mm/s	
Print Width	Max. 80mm	
Paper type	Continuous paper, marked paper	
Barcode Supported	One-dimensional bar code: UPC-A, UPC-E,JAN8 (EAN8), JAN13 (EAN13), CODE 39, CODE 93, CODE 128, ITF, CODABAR, GS1-128, GS1 DataBar Two-dimensional barcode: PDF417,QR,Maxicode,2D GS1 DataBar,Composite Symbology	
Fonts Supported	Font A: 12 × 24 Font B: 9 × 17 Kanji font A: 24 × 24 Traditional Chinese, Simplified Chinese (GB2312/18030), Japanese, Korean, English, HK (optional)	
Character enlarged	Font size can be enlarged 1-6times horizontally and vertically.	
Character Rotate	Printing can be rotated in four directions (0^0, 90^0,180^0, 270^0)	
Paper detection	Photoelectric sensor (paper end)	
Top cover detection	Micro Switch	
Print head heat detection	Thermal resistance	
Image process	Bitmap download	Direct bitmap print
	Download buffer size: RAM:128KB FLASH:Max.512KB	Support bitmap and execute quick print
Communication interface	RS232serial interface, USB interface, Ethernet interface	
Cash drawer connector	1～2 cash drawers	
Memory	RAM: 2MB, FLASH: 2M/4M	
Output	24V±5% DC average current 2.0A Max 8A(256 heating units work at the same time)	
Print head lifetime	≥150Km(12.5% standard 12.5% printing ratio printing sample	
Operation condition	5～45℃, 20%～90% (40℃)	
Storage condition	-40～60℃, 20%～93% (40℃)	
Dimensions	199mm×145mm×143mm(L×W×H)	

Figure1.3-1 technical specifications

1.4 Power switch, Feed button and Indicator

1.4.1 Power switch

Power switch is on the right of printer.

“O” power is turned off, “—” power is turned on.

Figure1.4.1-1 Power switch

1.4.2 Feed button

1) In self-test status:

- Power on printer while pressing the FEED button will start the printing of the configuration table.
- Press down the FEED button while power on printer, printer will start printing self-test page.

2) In normal status:

- The printer will feed paper continuously when press the FEED button for longer time; the printer will stop feeding paper when loosen the FEED button.

3) In printing status:

- Printer will be no action when press the FEED button.

1.4.3LED Indicator

Name	Status	Description
Power Indicator(Green)	On	Printer is powered on
	Off	Printer is powered off
Error Indicator(Red)	Flash	Printer is in error status
	Off	Printer is in normal status (except paper end or near end)
Buzzer	On	Printer is in error status

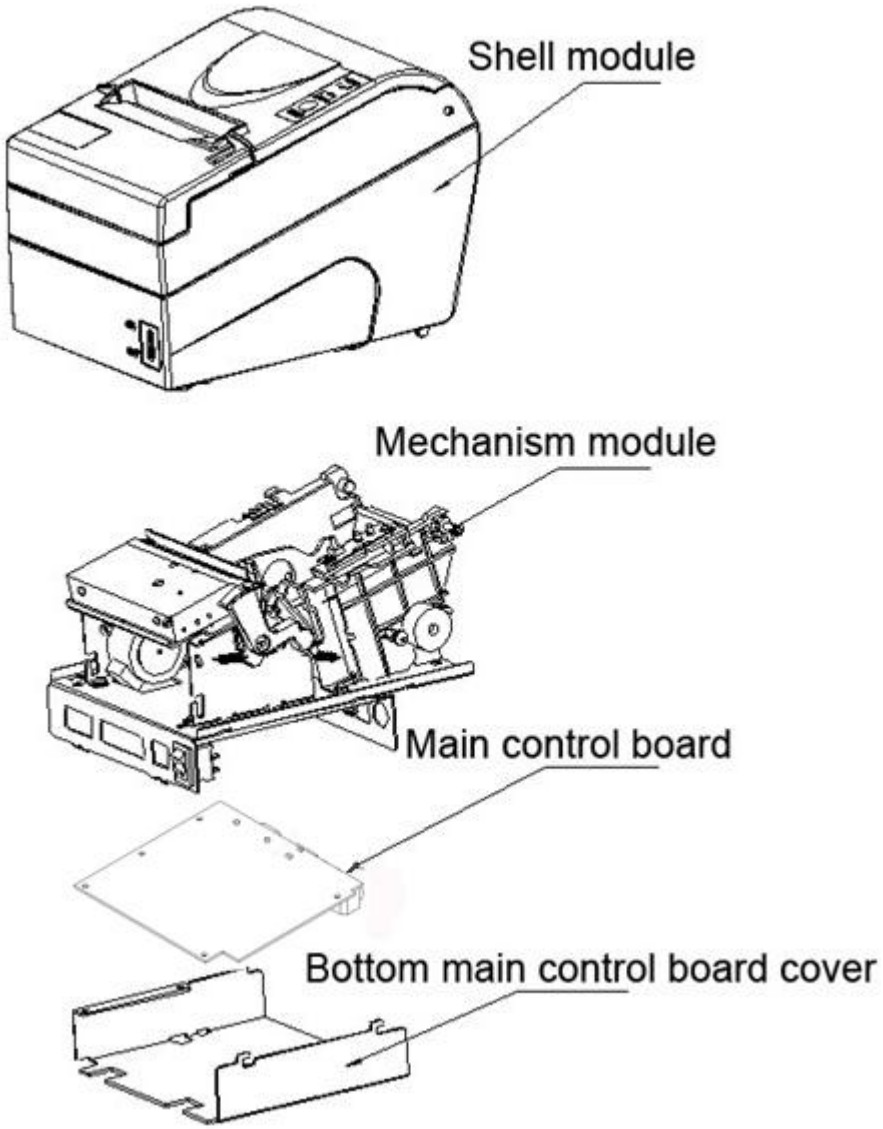
Figure1.4.3-1 LED, button label

2 Printer overview and Modules

2.1 Printer overview

BTP-R880NPII printer is made up of the following major components: printer and power adaptor. Printer consists of four main modules, including: Bottom cover board, Main control board, Printer mechanism, Printer, Shell module.

The overview is shown as below:



2.2 Main Control Board Unit Block Diagram

This printer uses main control board named POSJV1.2, the sensor, button, motor and cutter is connected to main control board via connectors. The block diagram is shown as below:

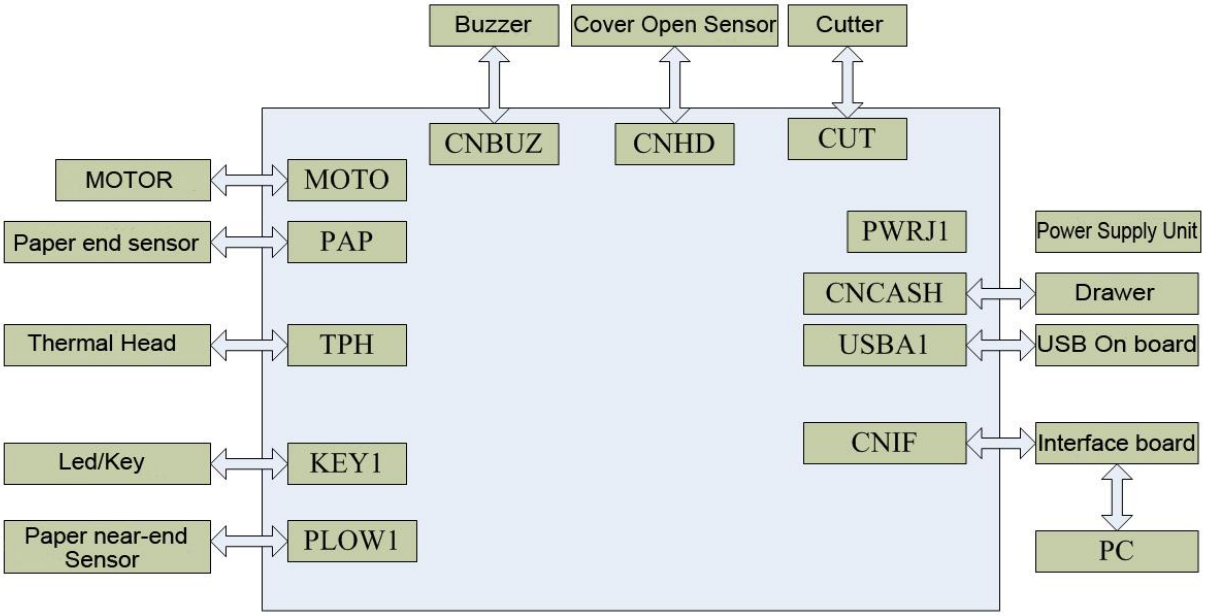


Figure 2.2-1 Main control board unit block diagram

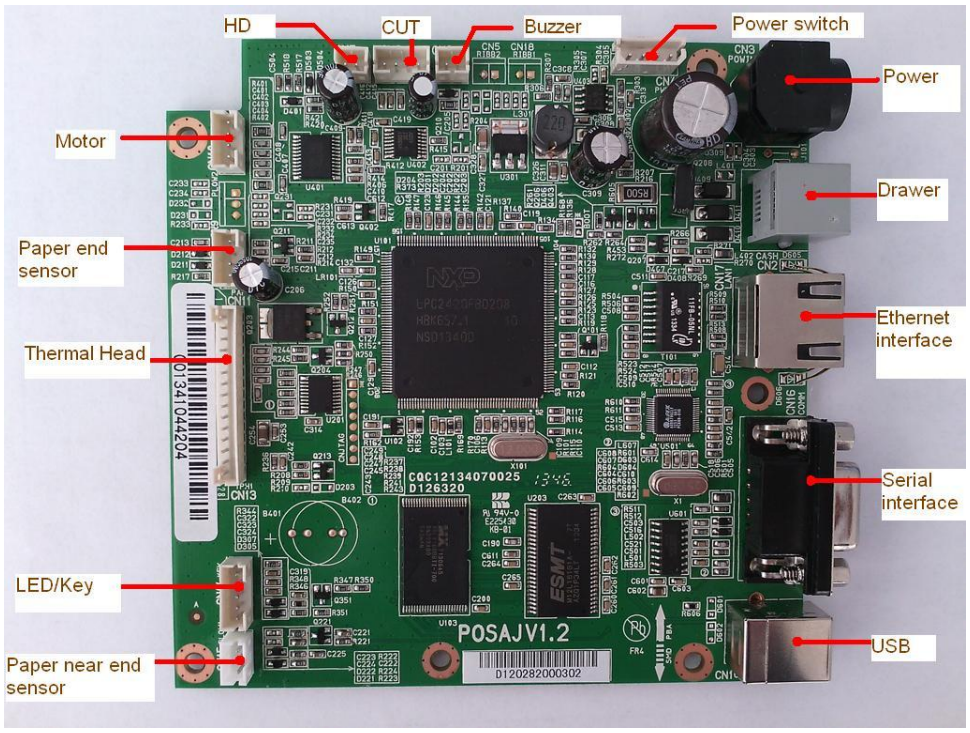


Figure 2.2-2 Position of each connector

3 Communication interface

BTP-R880NPII support RS232 serial interface, USB interface, Ethernet interface.

3.1 RS232 serial interface

3.1.1 Connector and specification

The printer serial interface is compatible with RS-232 standard, of which the outlet is 9PIN and the connector is female DSUB-9 type.

3.1.2 Signal definition

Signal definition of 9pin interface is as below:

Pin	Signal name	Signal direction	Function
1	NC	—	NC
2	RXD	Input	Data Input
3	TXD	Output	Data input
4	DTR	Output	Require to Receive
5	GND	—	GND
6	DSR	Input	Require to send
7	RTS	Output	Require to Receive
8	CTS	Input	Require to send
9	+5V	Output	Not connected

3.1.3 Interface parameters

Parameters of the Serial interface module:

Item	Parameter
Data transfer	Serial
Synchronize method	Asynchronism
Handshaking	DTR/DSR or XON/XOFF
Pressure	MARK = -3 to –15 V: logic 1/ OFF SPACE = +3 to +15 V: logic 0/ ON
Baud rate	1200,2400,4800,9600,19200,38400,57600，115200bps
Data bits	8bits
Stop bits	1bit

Notes:

All of the baud rates, data bits and parity bits of the serial interface can be configured by EEPROM.

3.1.4 Default Setting

Default configuration of the printer.(user can inquire the interface configuration by printing self test page)

Baud rate: 9600bps

Data bits: 8bits

Parity bits: NO

Stop bits: 1bit

Handshaking: Hardware

3.1.5 Timing sequence

The software handshake (XON/XOFF) timing sequence:

When XON/XOFF control is selected, the printer transmits XON or XOFF signals as follows.

	Printer status	Action
XON Transmission	1) When the printer goes online after turning on the power 2) When the receive buffer is released from the buffer full state	Transmit Transmit
XOFF Transmission	1) When the receive buffer becomes full	Transmit

Notes:

1) Definition of “receive buffer full”: default size of receive buffer is 4K (which can be set to 45Byte/64K). When the buffer size is less than a certain amount (the number of bytes is n1) and the interface is serial, receive buffer is full and keep full status. It is not full until the buffer size is increased to another certain amount. (The number of bytes is more than n1).

2) Definition of XON/XOFF: XON is 0X11 and XOFF is 0X13.

The hardware handshake (XON/XOFF) timing sequence:

When hardware handshake is selected, the status of signal DTR/DSR is shown as below:

	Printer status	Status
DTR	1) When power on the printer and the printer is on line.	SPACE
	2) When receive buffer is released from full status.	SPACE
DSR	1) When receive buffer is full.	SPACE

3.1.6 Error processing

Error phenomena: Data can not be sent and received.

Error causes:

1) The cable is not connected reliably.
2) The parameter setting is wrong.
3) The circuit is void welded or damaged.

Error detects and debugs:

1) Check whether the serial cable is connected reliably or not, if not, please connect it again.
2) Check whether the serial port setting of host is same as the printer configuration sheet or not, if not, please configure the serial port setting again and send the data again.
3) Check whether the serial port signal is normal or not, If not, please check whether signal channel is normal or not. If so, please check whether SU01 is void welded or not. If not, please replace SU01.

3.2 USB interface

3.2.1 USB Interface Connector and Specifications

The USB Interface Connector is a standard USB B Interface Connector.

3.2.2 Signal Define of the USB Interface Module

Signal Define:

Pin	signal	Signal define
1	VCC	Power
2	DATA+	Data +
3	DADA-	Data -
4	GND	Ground

3.2.3 Signal cable of USB interface module

USB interface cable adopts standard USB A TO B cable, cable length1.5M. USB interface cable accord with USB2.0 standard.

3.2.4 Parameters of the USB Interface Module

The USB interface supports USB2.0 protocol and can concatenate through USB HUB.

3.2.5 Troubleshooting of the Interface Module

Error phenomena: Data can not be sent out, data can not be received.

Error causes:

1) Cables are not connected securely.
2) Some parts on the USB interface circut are void welded or damage.

Error detects and debugs:

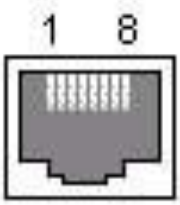
1) Change to a new USB cable and test again.
2) Check if the capacitors and resistors are welded normally. Replace U101 and test again if they are welded normally.

3.3 Ethernet interface

3.3.1 Ethernet interface connector and specification

The parameters of network interface socket match 10BASE-T standard of IEEE802.3.

Pin	Signal name	Introduction
1	TX+	Data sending+
2	TX-	Data sending-
3	RX+	Data receiving +
4	NC	Reserve
5	NC	Reserve
6	RX-	Data receiving -
7	NC	Reserve
8	NC	Reserve



3.3.2 Ethernet interface electric specification

Output signal: Efficient differential mode voltage more than 450mV, top voltage more than 13V. Common mode alternating top voltage is less than 2.5V.

Input signal: differential mode voltage more than 160mV is regarded as efficient mode voltage.

3.3.3 Troubleshooting of the Interface Module

Detailed information please refer to **Quick Reference to Ethernet Interface Module.**

4 Disassembly and Assembly

Caution:

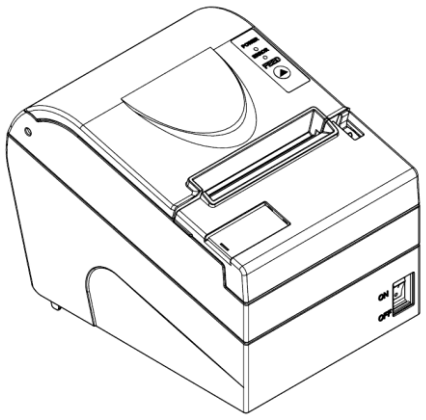
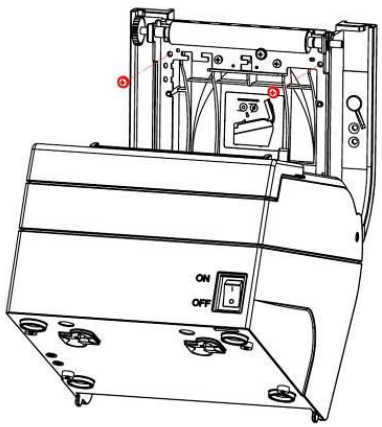
1) Do not disassemble any parts of the printer or loosen any screw if it works properly;
2) When disassembling parts, please check carefully if the connecting lines are damaged or not;
3) When handling the thermal print head or electronic components, please make sure to use antistatic gloves or bracelet;
4) During the disassembly, be careful not to leave small parts or screws inside the printer;
5) Don't scratch the print head surface.
   Assistant material: Lubricant, alcohol, absorbent cotton.

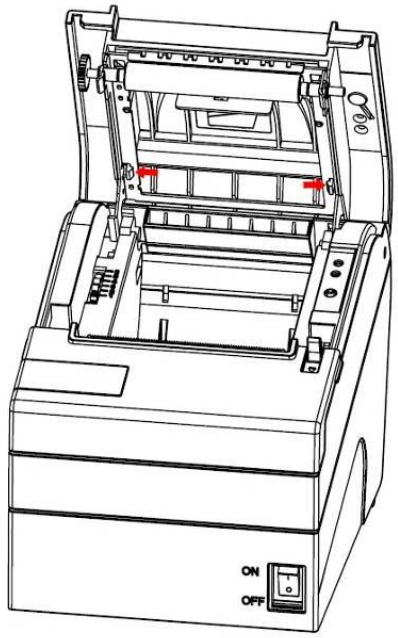
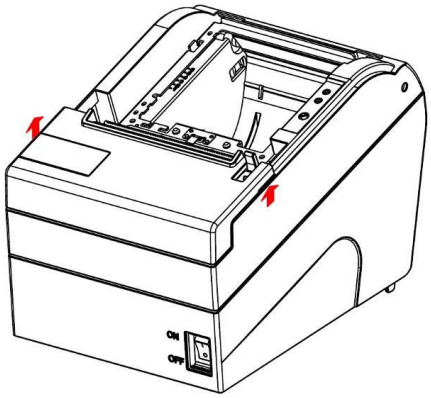
4.1 Maintainance tools

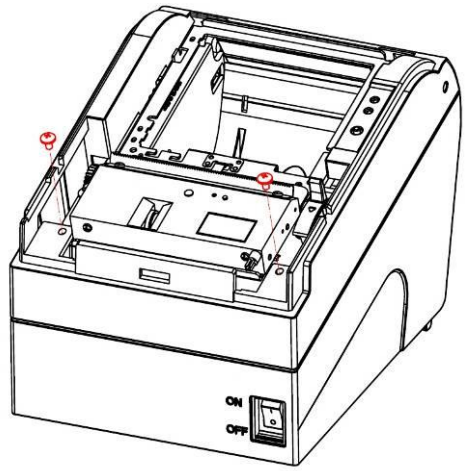
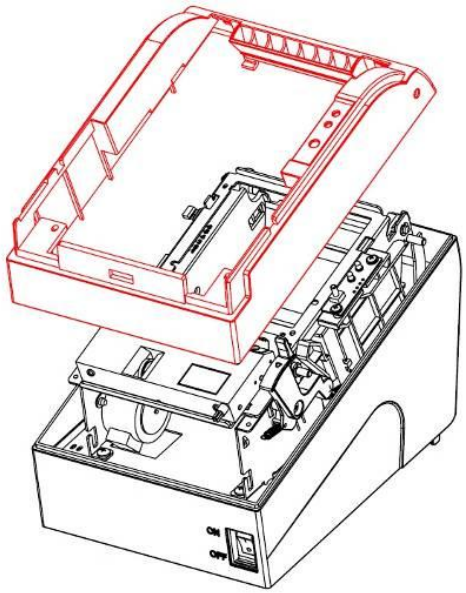
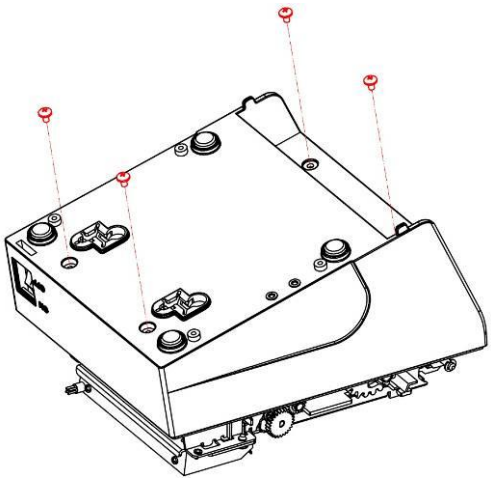
- □ Screw Driver(Philips type)
- □ Screw Driver (line type)
- □ Wire clamp pliers

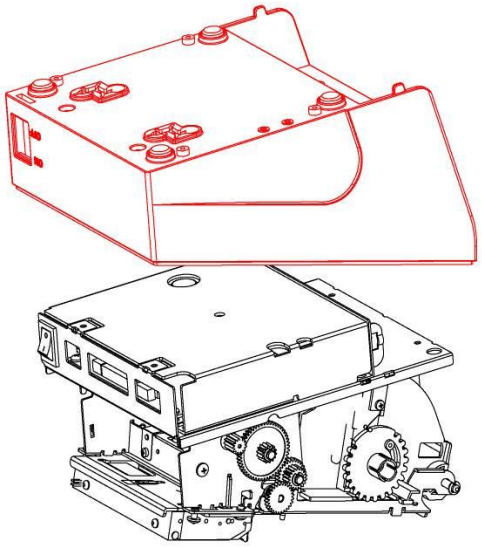
4.2 Disassemble the Printer

4.2.1 Disassemble bottom and top covers

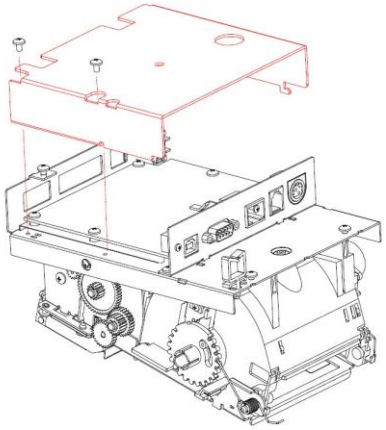
Figure	Instruction
1. 	Top view of printer
2. 	Press the latch of the top cover and open it; disassemble two ST2.6×6 self tapping screws.

3. 	Follow the arrows to push the hooks on the right and left of the top cover so that it could be taken off the roller bracket.
4. 	Take off the top cover
5. 	Follow the arrows to uplift the cutter cover and take it off

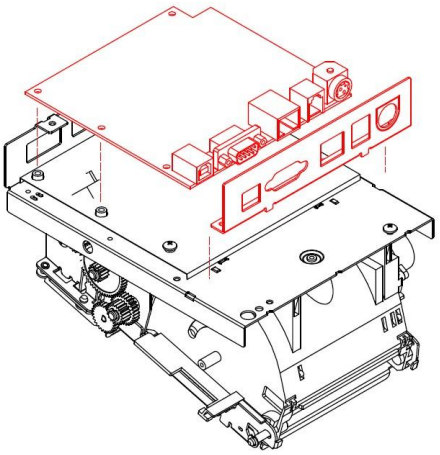
6. 	Unscrew two M3*5 screws which fix the middle body
7. 	Take off the middle body
8. 	Unscrew four M3*5 screws which fix the lower body and take off the lower body

10. 	Take off the lower body, separate it from the mechanism and finish disassembling the printer housing

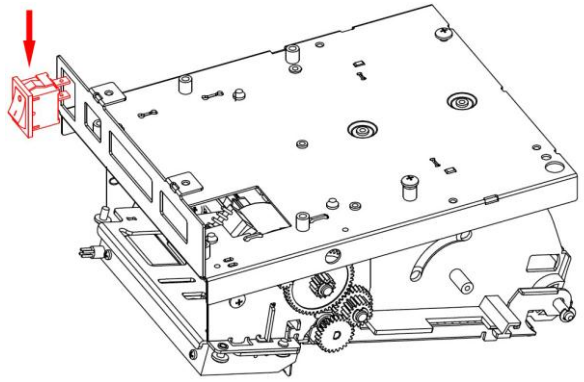
4.2.2 Disassemble lower board cover

	Disassemble two ST2.9tapping screws and separate the hook of the bottom circuit board cover from the circuit board cover to take off the bottom circuit board cover.

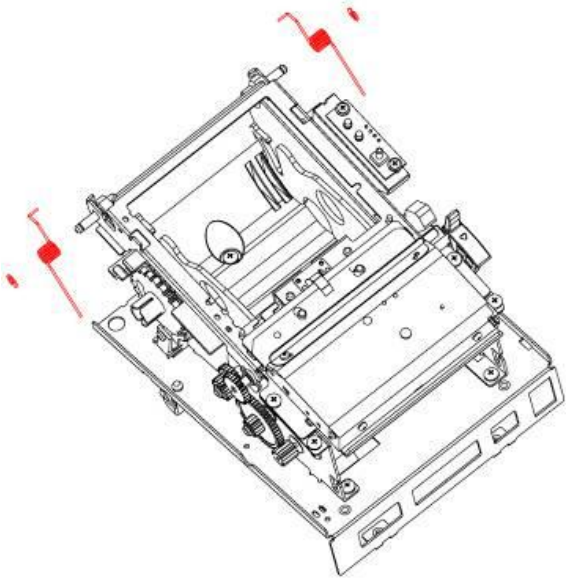
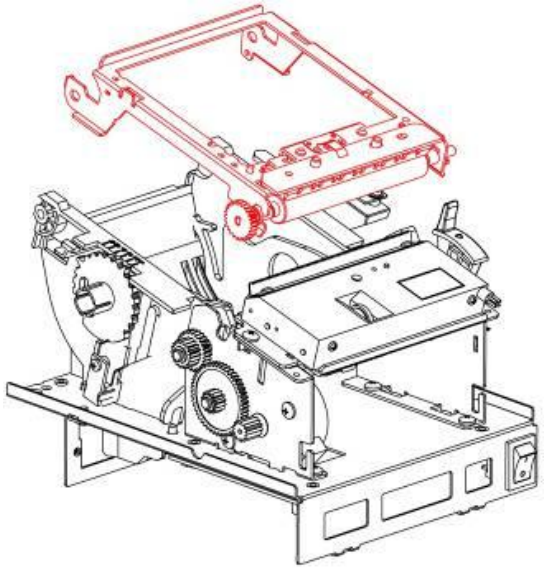
4.2.3 Disassemble the main control board and the main control boardprotection film

	Unscrew the four M3*5 screws fixing the main control board and separate the main control board from the mechanism.

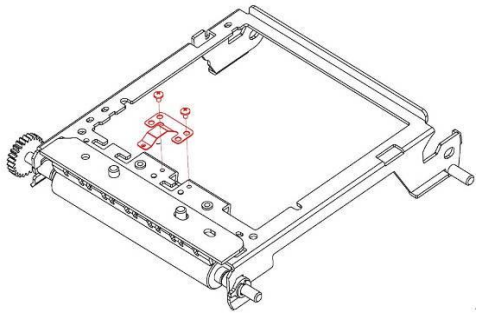
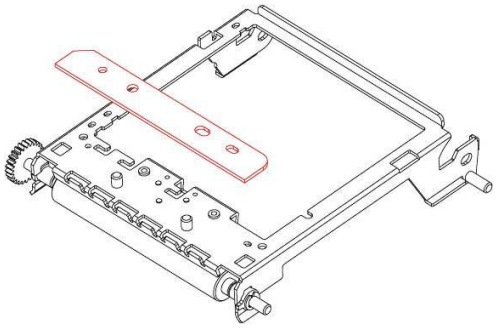
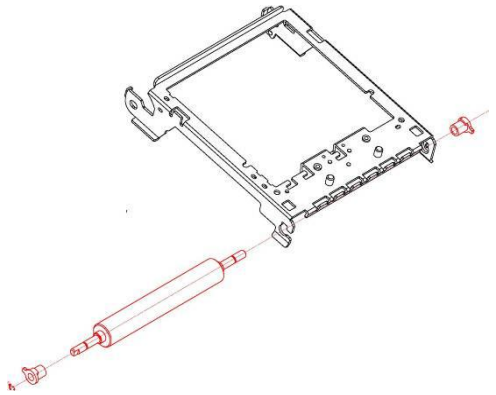
4.2.4 Disassemble the power switch

	Follow the arrows to hold the power switch flat spring, and remove the power switch from the main control board cover.

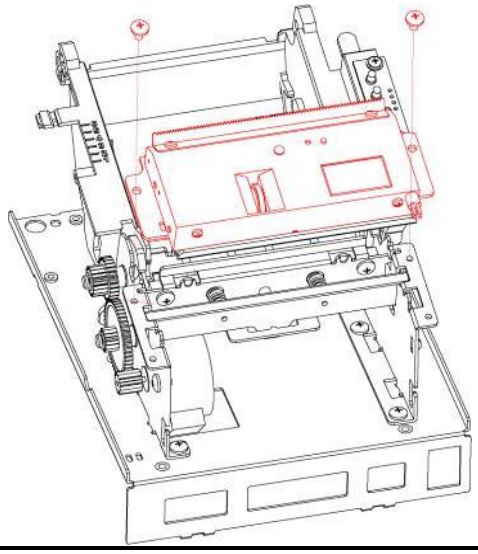
4.2.5 Disassemble top cover

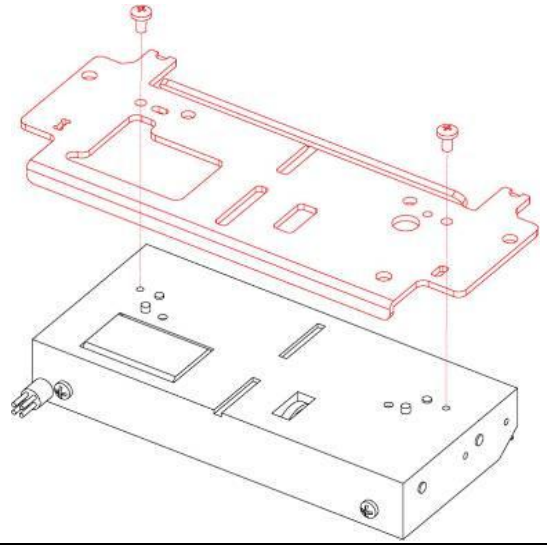
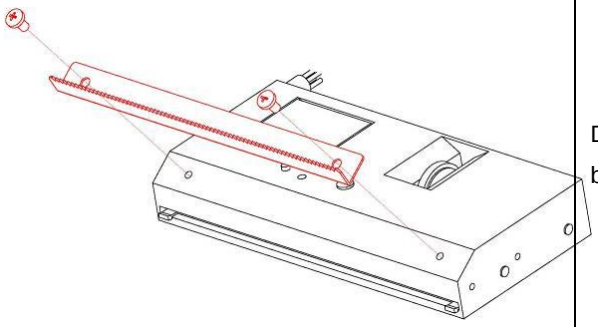
1. 	Disassemble the two ϕ 3”E” rings which fix the top cover shaft and take the torque spring and the shaft out.
2. 	Remove the top cover bracket from the mechanism and finish the disassembly of the top cover bracket

4.2.6 Disassemble the cutter still blade and platen roller

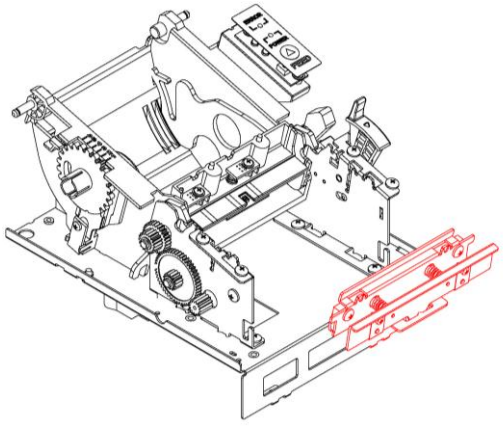
1. 	Disassemble the two M2.5*4 screws fixing the still blade shrapnel and take it off.
2. 	Take the still blade out of the still blade Fixed column.
3. 	Disassemble the two “E” rings fixing roller bracket, take the roller shaft sheath out of it and take the platen roller off.

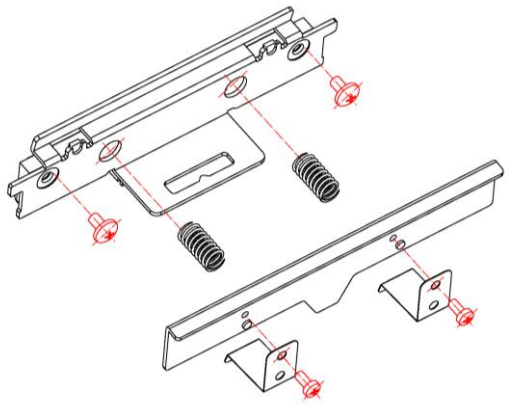
4.2.7 Disassemble the cutter

1. 	Disassemble the two M3*5 screws which fix the cutter module, and remove the cutter from the mechanism bracket.

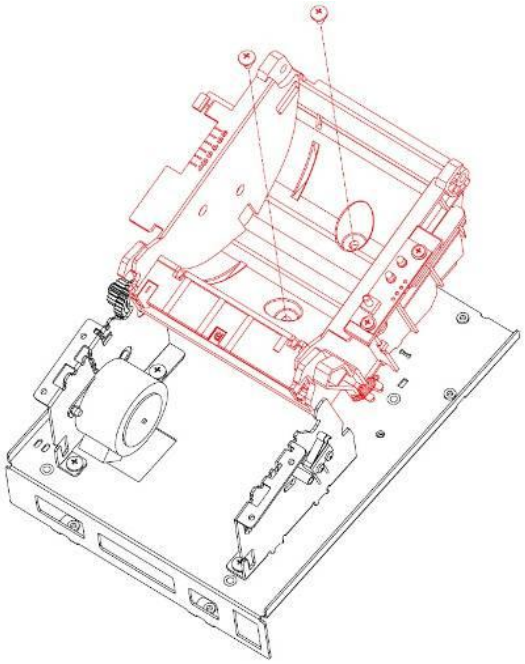
2. 	Disassemble the two M2 *4 screws fixing the cutter and separate the cutter from its holder.
3. 	Disassemble the two ST2.2*3 screws fixing the tear-off bar and take it off.

4.2.8 Disassemble the print head module

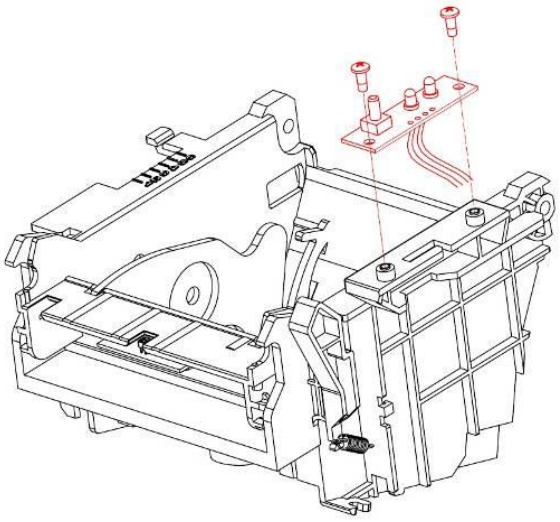
1. 	Remove the print head module from the mechanism and separate the print head holder from the mechanism.

2. 	Disassemble the two M2.5*5 pan head screw switch fix the pressure spring bracket and separate the print head pressure spring and the print head supporting pressure spring from the pressure spring bracket; Disassemble the two M3*4 pan head screws which fix the print head, separating the print head and its bracket.

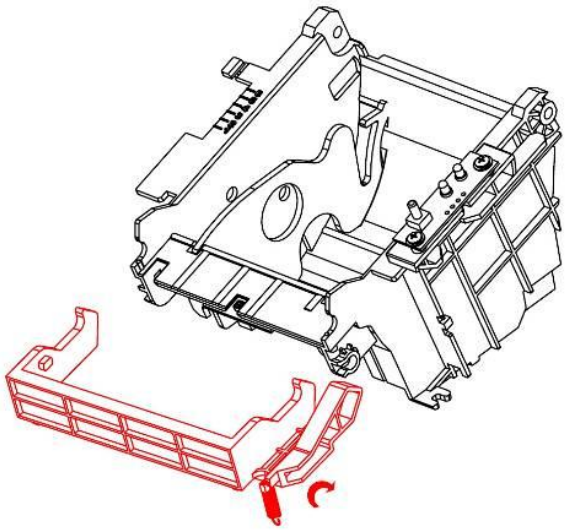
4.2.9 Disassemble paper house

	Unscrew two M3*5 screws which fix the interface board to take off the paper house from logic board cover.

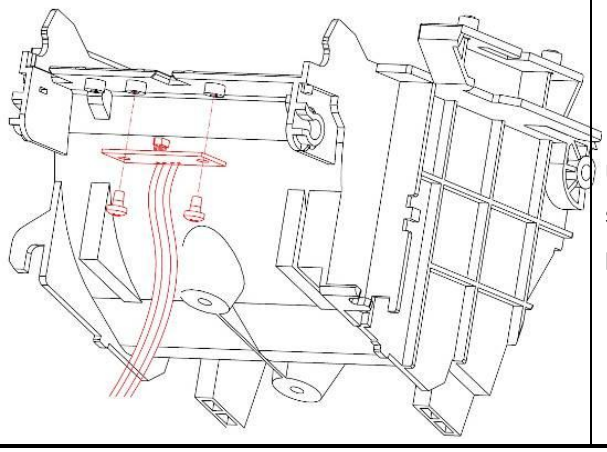
4.2.10 Disassemble feed button board

	Unscrew two ST2.6*4 screws which fix the feed button board to take off the feed button board from paper house.

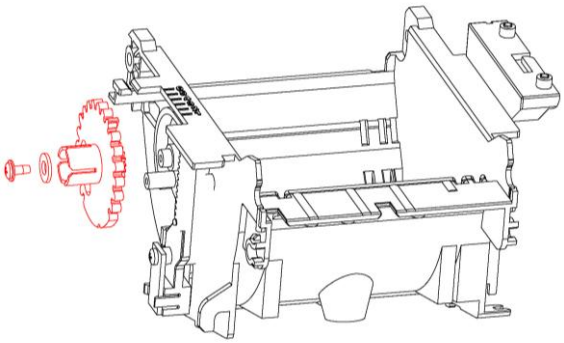
4.2.11 Disassemble hook

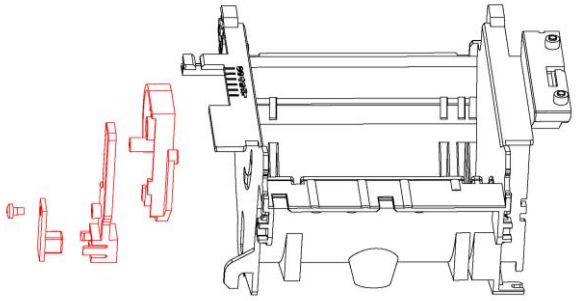
	Take off the spring from paper house, and then rotate it as the direction in left picture to take the hook out from paper house.

4.2.12 Disassemble sensor

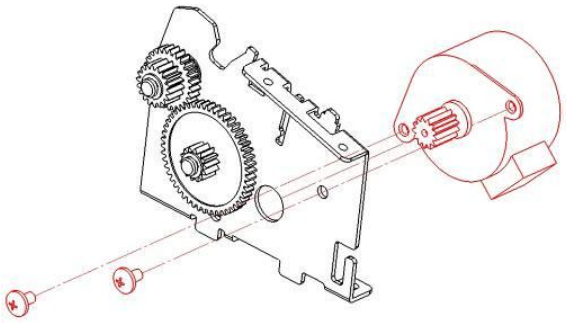
	Unscrew the two ST2.6*4 screws fixing the paper sensor and take off the paper sensor out from the paper house.

4.2.13 Disassemble the Paper End Sensor Module and its sensor

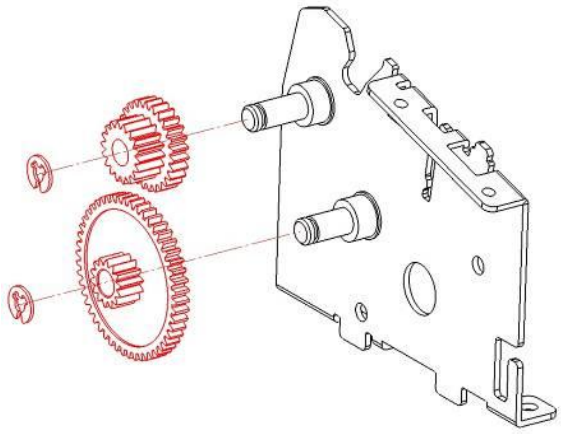
	Disassemble the ST2.6*6 screw fixing the paper near end latch and the spring washer and take off the paper near end latch from the paper house.

	Unscrew the ST2.6*6 screw fixing the paper near end sensor, take it off from the paper house, and remove the paper near end holder and the paper near end bracket from the paper house.

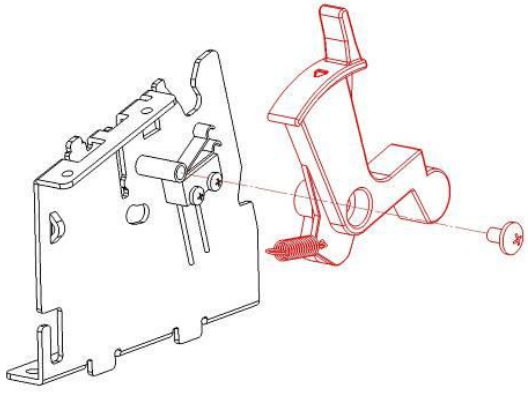
4.2.14 Disassemble the motor

	Disassemble the two spring gaskets which fix the motor and the flat gasket and take off the motor from the mechanism left holder.

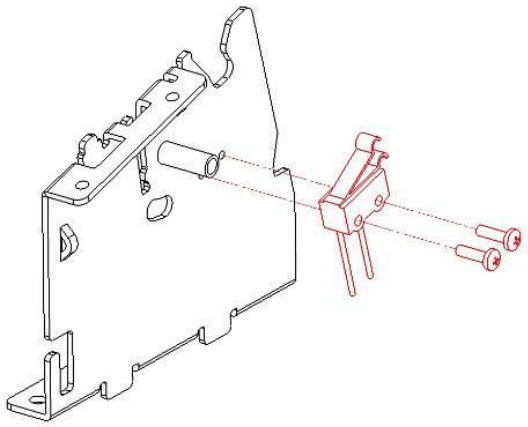
4.2.15 Disassemble the gear

	Disassemble the two ϕ 4 “E” rings fixing the gear and take off the gear from the mechanism left holder.

4.2.16 Disassemble the latch

	Fix the latch spring on one end of the mechanism right holder and unscrew the M3*5 screw fixing the top cover latch.

4.2.17 Disassemble the Micro Switch

	Unscrew the two M2*8 screws fixing the micro switch and take off the Micro-switch.

4.3 Printer assembly

Assemble the printer in the reverse sequence of disassembly.

5 Maintenance of Main Parts

5.1 Print head cleaning

When the TPH happens in any case as below, you should clean it:

- ✧ Printout is not clear;
- ✧ Some tier printout is not clear;
- ✧ Noise in paper feed or retraction is high.

The steps for cleaning print head are shown as below:

1) Turn off the printer power and open the top cover;
2) If printing is just finished, please wait until the print head is completely cooled;
3) Use alcohol cotton (wringed out) to wipe away the dust on the surface of print head and roller;
4) Wait until the alcohol is completely evaporated, then close the top cover.

5.2 Sensor cleaning

When the printer occurs in any case as below after manual check, you should clean marked paper sensor:

- ✧ During the print, the printer sometimes report paper end error;
- ✧ Fails to identify marks effectively;
- ✧ The printer doesn't alarm while paper out.

The steps for cleaning the platen are shown as below:

1) Turn off the printer power and open the top cover;
2) Clean the platen with alcohol cotton (should be twisted);
3) Turn on the printer power until the platen is dry.

5.3 Roller cleaning

In the following cases, the platen should be cleaned:

- ✧ Printout is not clear;
- ✧ Some tier printout is not clear;
- ✧ Noise in paper feed or retraction is high.

The steps for cleaning the platen are shown as below:

1) Turn off the printer power and open the top cover;
2) Clean the platen with alcohol cotton (should be twisted);
3) Turn on the printer power until the platen is dry.

Caution:

- ✧ Must be sure that the power is off during routine maintenance.
- ✧ Don't allow to touch the TPH with hand and metal, or scratch the surface of the TPH, platen and sensor with forceps.
- ✧ Do not use organic solvent such as gasoline and acetone to clean the TPH and platen.
- ✧ Don't turn the power to go on print until the alcohol volatilize completely.

6 Troubleshooting

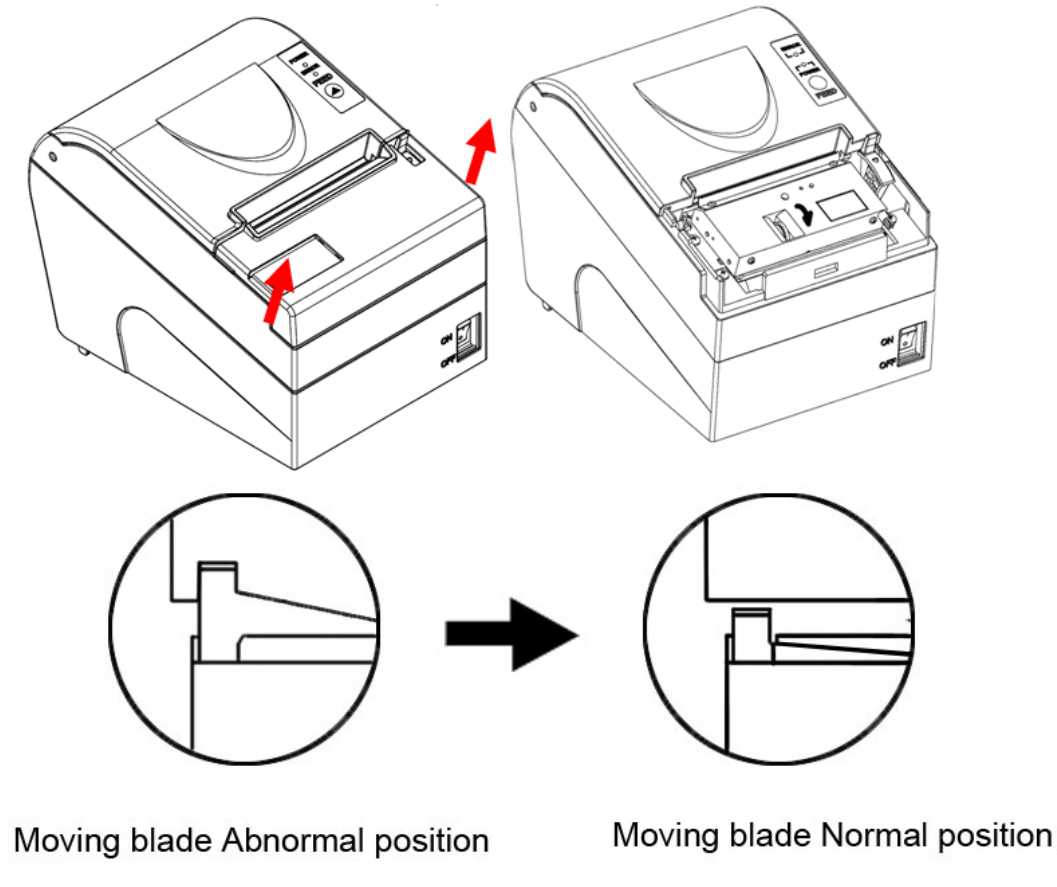
In case of printer fault, consult this section for solutions and advice.
If you do not find a solution in this section, please contact your local dealer for assistance.

6.1 Cutter error troubleshooting

When cutter fails to recover due to paper jam or sudden off-line status, the top cover cannot be uplifted for the cutter sliding blade is pinned. At this time, you mustn't uplift the top cover by force, otherwise the cutter will be damaged and the printer will not be able to work normally.

Perform the following actions:

1) Turn off power of the printer;
2) Put your hands on both sides of the cutter top cover and pull it out according to the arrows in the figure below to expose the manual knob on the cutter sliding blade;
3) Rotate the white knob according to the arrows in the figure below, observe the action of the cutter from the paper path; Wait until the cutter sliding blade completely deviates from the still blade, open the top cover and clear paper jam.



Notice 1: When revolving the thumb wheel, the cutter sliding blade acts slowly. Go on revolving and observe carefully.

Notice 2: If the thumb wheel cannot be turned, do not force the wheel, instead turn it the opposite direction.

6.2 Printer doesn't work

Problems	Possible Causes	Solution
LED is off and the printer doesn't work	Printer power is off.	Make sure that printer cable has been connected properly on both ends.

6.3 Error LED and buzzer

Problems	Possible Causes	Solution
Error LED flashes and buzzer beeps	Paper end	Replace roll paper
	Cutter error	Refer to 6.1 Cutter error troubleshooting
	Top cover up	Close top cover
	Print head overheated	Turn off printer power and wait until the print head turn to normal temperature.
Buzzer beeps and error LED on	These indicate a serious problem	Contact your local distributor or a technician of manufacturer for assistance.

6.4 Problems during Printing

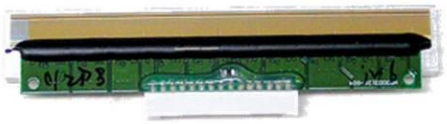
Problems	Possible Causes	Solution
Paper cannot be fed normally	Paper jam	Open top cover to check paper path and cutter and remove paper jam
Printer starts printing but stops suddenly	Paper jam	Open top cover to check the cutter and remove paper jam
Paper is not cut	Paper jam	Open top cover to check the cutter and remove paper jam
Printout is not clear or dirty	Paper roll is not installed correctly	Make sure that the paper roll has been installed correctly
	Paper is out of specification	Use recommended thermal paper
	Dirty print head or platen roller	Clean the print head or the platen roller
	Print darkness is too low	Adjust the print darkness to 110% or 120% as needed
Vertical column of print is missing	Dirty print head or platen roller	Clean the print head or the platen roller

Appendix

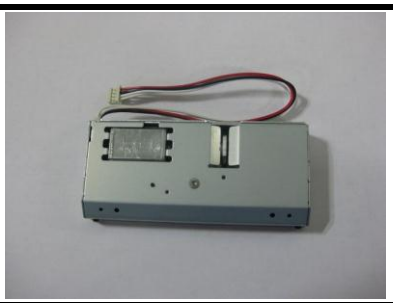
Appendix 1 Command set

Refer to Programming Manual

Appendix 2 Service Parts List

Parts		Number	Amount	Reference picture
TL80 print head		3000-906822	1	
TPH cable		7110-900714	1	
Paper sensor module		7600-910789	1	
Platen roller		8301-909972	1	
Step motor		3200-900260	1	
Gear set	Platen roller gear (Smallest)	8203-902239	1	
	Gear 2 (Middle size)	8203-901777	1	
	Transmission gear (Largest)	8203-901466	1	

Main control board		7201-917768	1	
Power switch	Cymbiform switch(white)	7600-910793	1	
	Cymbiform switch(black)	7600-910792	1	
Feed button control board		7600-911463	1	
Micro switch		7600-911464	1	
paper near end sensor		7600-910972	1	
Rubber foot		8303-901997	4	

Cutter	3100- 909137	1	
Keypad	8205-911389		

Appendix 3 Printer Exploded View

1 Printer Exploded View

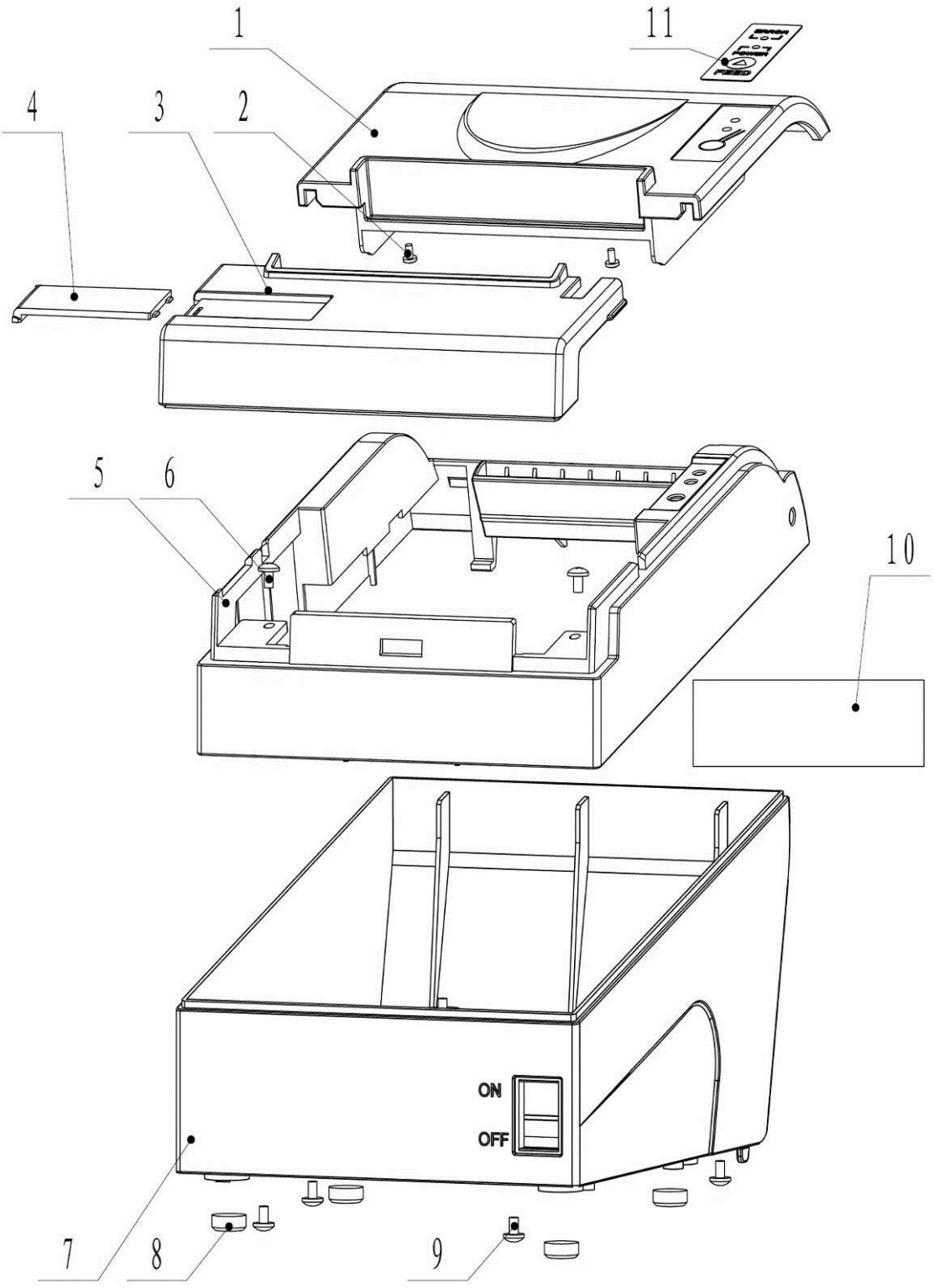


Figure appendix 3-1

2 Exploded view

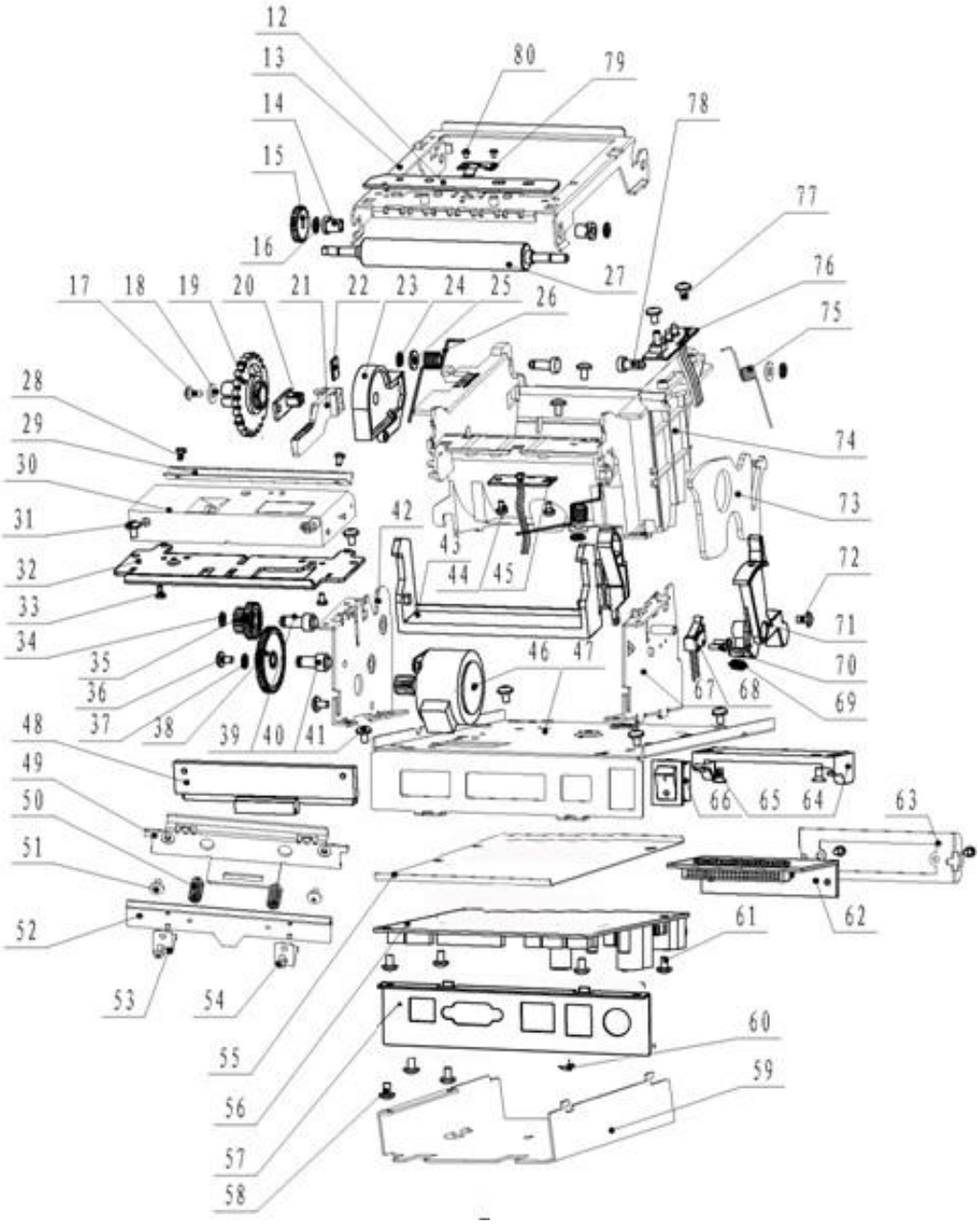


Figure appendix 3-2

Appendix 4 Parts list

Ref. No.	Parts No.	Description	Quantity	Remarks
1	8201-909977	Upper cover(black)	1	
	8201-909983	Upper cover(white)		
2	4002-900301	ST2.6*6(with washer)	2	
3	8201-909978	Cutter cover(black)	1	
	8201-909984	Cutter cover shell(white)		
4	8201-905234	Upper cover connect (black)	1	
	8201-905233	Upper cover connect (white)		
5	8201-909979	Middle cover(black)	1	
	8201-909985	Middle cover(white)		
6	4006-900295	M3*5	2	
7	8201-909980	Bottom cover(black)	1	
	8201-909986	Bottom cover(white)		
8	8303-901997	Rubber foot	4	
9	4006-900295	M3*5	4	
10	8205-916067(SNBC)	Product label	1	
11	8205-910012	Feed button label	1	
12	3100-909137	Cutter stationary blade	1	
13	8103-909993	Platen holder	1	
14	8211-907575	Platen shaft bushing	1	
15	8203-902239	Platen gear	1	
16	4400-900293	Opening washer ¢3	1	
17	4002-900301	ST2.6*6(with washer)	1	
18	4200-900631	ϕ5 flat gasket	2	
19	8299-910003	Paper near end latch	1	
20	7600-910972	Paper near-end sensor	1	
21	8299-910002	Paper near-end holder	1	
22	8299-900377	Paper near-end dustproof cover	1	
23	8299-910001	Paper near-end holder	1	
24	4400-900293	Opening washer ¢3	2	
25	4200-900631	Gasket		
26	8005-910010	Top cover torque spring	1	
27	8301-909972	Platen	1	
28	4002-900301	ST2.6*6(with washer)	1	
29	8104-909281	Tear-off bar	1	
30	3100-909137	Cutter sliding blade	2	
31	4006-900295	M3*5	2	
32	8103-909997	Cutter sliding blade holder	2	
33	4000-900056	Pan head screws M2*4	2	
34	4400-900627	ϕ4 “E” ring	1	
35	8203-901777	Gear (18-27)	1	
36	4006-900295	M3*5	1	
38	8203-901466	Gear (50)	1	

39	8001-910007	Gear shaft2	1	
40	8001-910006	Gear shaft 1	1	
41	4006-900295	M3*5		
42	8103-909992	Mechanism left holder	1	
43	8299-909999	Lock hook	1	
44	4002-902695	ST2.6*6	2	
45	7600-910789	Paper sensor	1	
46	3200-900260	Motor	1	
47	8102-909989	Main control board cover	1	
48	3000-906822	TPH	1	
49	8103-909994	TPH holder	1	
50	4000-900184	Pan head screws M3*4	1	
51	8005-900090	TPH pressure spring	2	
52	8103-909996	Pressure spring holder	1	
53	8104-916073	TPH supporting pressure spring slice	1	
54	4000-900988	Pan head screws		
55	8.0.06.9036606	Main control board protection film	1	
56	7201-916251	Main control board	1	
57	8.1.01.9036595	Interface baffle	1	
58	4006-900295	M3*5	2	
59	8102-916062	Lower circuit board cover	1	
60	4006-900295	M3*5	2	
61	4006-900295	M3*5	4	
62		Interface board	1	
63	8103-900144	Pin serial baffle	1	
64	8210-903328	Guiding board	1	
65	4001-907875	Sunk head screws M3*4	2	
66	7600-910792 (white) 7600-910793 (black)	Power switch	1	
67	8103-909991	Mechanism right holder	1	
68	7600-911464	Micro switch	1	
69	8005-905133	Draught spring	2	
70	4000-900057	Pan head screws M2*8	2	
71	8201-909982	Cover-opening latch(black)	1	
	8201-909988	Cover-opening latch(white)		
72	4006-900295	M3*5	1	
73	8299-910000	Card baffle	1	
74	8299-909998	Paper house	1	
75	8005-916061	Top cover right draught spring	1	
76	7600-911463	Feed button board	1	
77	4002-902695	ST2.6*6	1	
78	8001-916060	Top cover shaft	2	
79	8104-909995	Cutter stationary blade spring platen	1	
80	4000-900056	M2*4	2	

Appendix 5 Overall Dimension

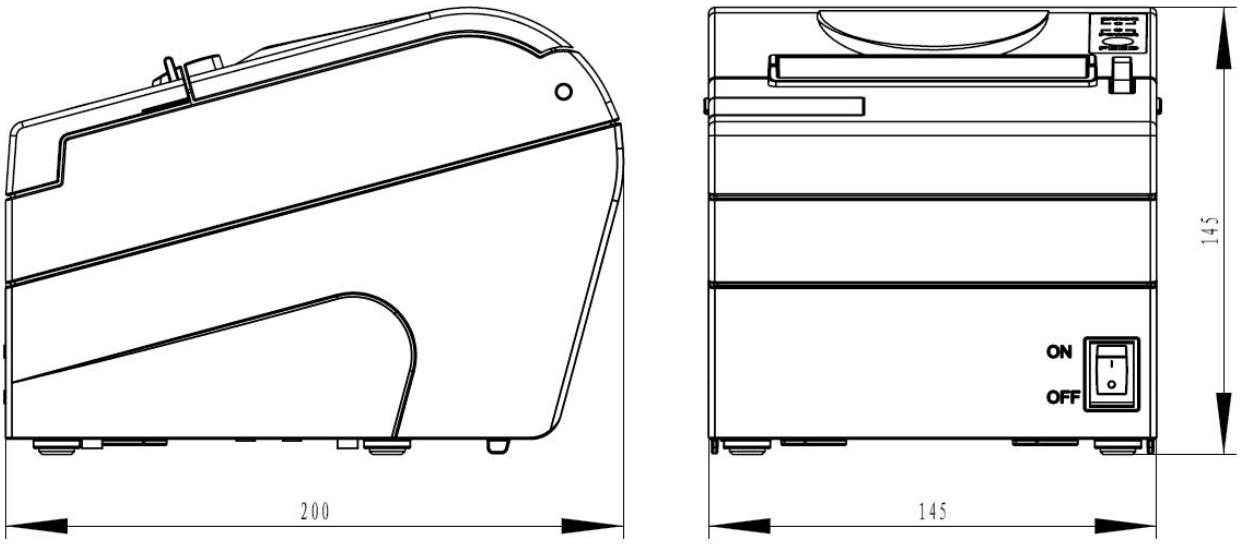


Figure appendix 5-1

Appendix 6 Main board layout

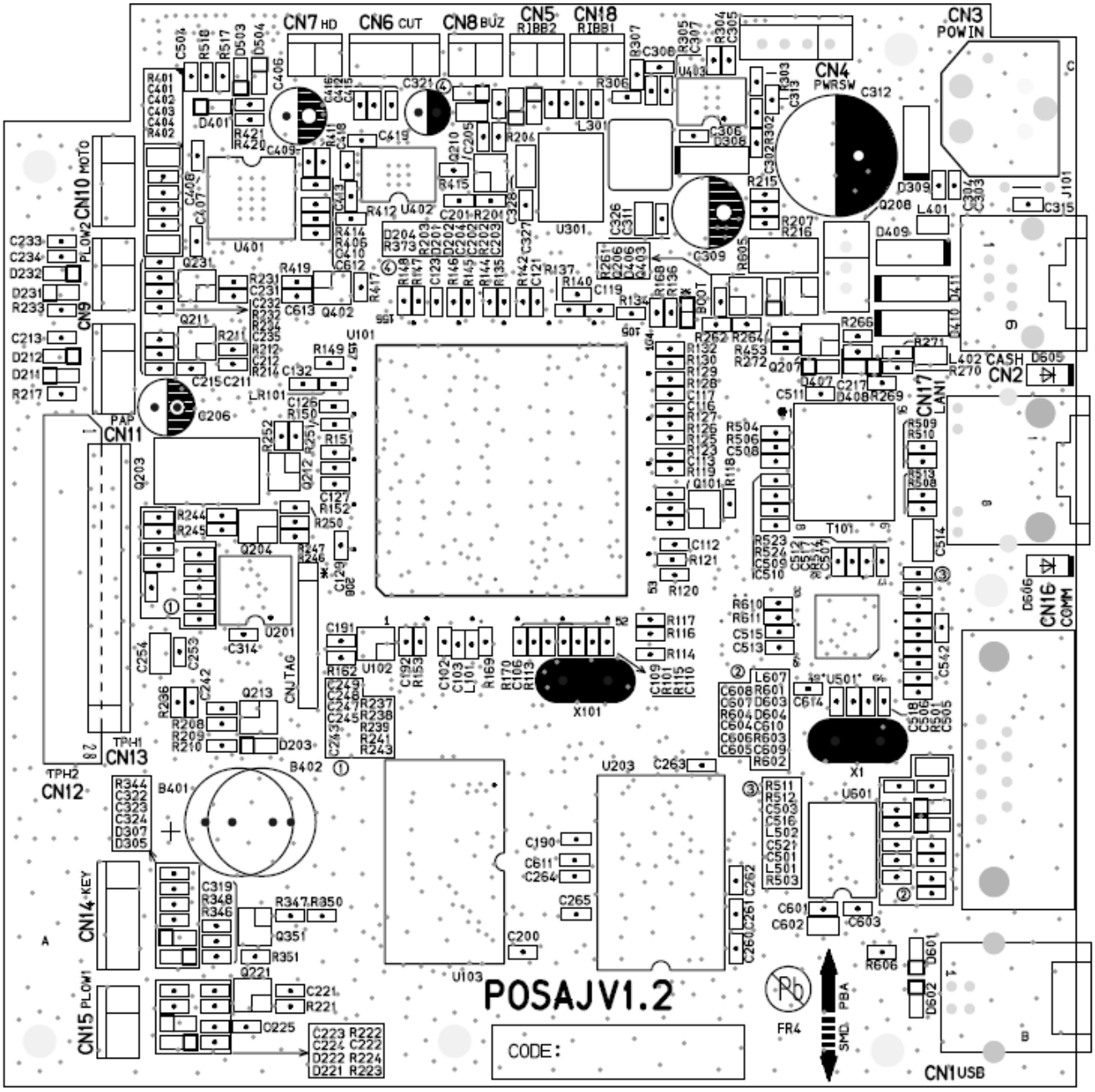


Figure appendix 6-1 Front layout of main board

Appendix 7 button setting list

Parameter setting (configuring) by Feed button

1) Hold the FEED button pressed while switching the printer on.
2) After the printer has printed the configuration sheet, press and hold the FEED button to configure the printer. The main menu for the key-stroke setting procedure is printed.
3) The procedure consists of several sub-menus and step-by-step working is needed.
4) Every choice has a number, which indicates the number of times the FEED button has to be shortly pressed. After this, the choice is validated by an additional, but longer press of the FEED button (1 sec).

After all settings have been done, they are stored in the printer by stepping back through the submenus to the main menu by using the number “1” plus additional press for validation.

PARAMETER SETTING BY FEED BUTTON

MAIN MENU									
Exit	->1								
Print Self Test	->2								
Configuration	->3	CONFIGURATION							
		Exit Without Save	->1						
		Exit With Save	->2						
		Communication	->3	Back To Last Menu	->1				
				Serial Interface	->2	SERIAL INTERFACE			
						Back To Last Menu	->1		
						Baud Rates	->2	BAUD RATES:19200bps	
								Back To Last Menu	->1
								9600bps	->2
								19200bps	->3
								38400bps	->4
								57600bps	->5
								4800bps	->6
								2400bps	->7
								1200bps	->8
								115200bps	->9
						Parity	->3	PARITY:NONE	
								Back To Last Menu	->1
								None	->2
								Odd	->3
								Even	->4
						Data Bits	->4	DATA BITS : 8 Bits	
								Back To Last Menu	->1
								7 Bits	->2
								8 Bits	->3
						Stop Bit(s)	->5	STOP BITS: 1 Bit	
								Back To Last Menu	->1
								1 Bit	->2
								2 Bits	->3
						Handshaking	->6	HANDSHAKING:DTR/DSR	
								Back To Last Menu	->1
								DTR/DSR	->2
								XON/XOFF	->3
						Data Receive Error	->7	DATA ERROR SETTING:Ignored	
								Back To Last Menu	->1
								Ignored	->2
								Print '?'	->3
				Ethernet Interface	->3				
						No parameters to be set for Ethernet			
				USB Interface	->4	USB MODE:API MODE			
						Back To Last Menu	->1		
						WinDriver Mode	->2		
						API Mode	->3		
				Rx Buff Size	->5	RX BUFFER SIZE:4K Bytes			

					Back To Last Menu	->1			
					4k Bytes	->2			
					45 Bytes	->3			
					64K Bytes	->4			
	Mechanism & Hardware	->4	HARDWARE SETTINGS						
			Back To Last Menu	->1					
			Mark Sensor	->2	MARK SENSOR: Disable				
					Back To Last Menu	->1			
					Enable	->2			
					Disable	->3			
			Cutter	->3	CUTTER:				
					Back To Last Menu	->1			
					Cut Mode Settings	->2	CUT MODE SETTINGS: DefaultCutMode		
							Back To Last Menu	->1	
							Enable	->2	
							Disable	->3	
							Full Cut Mode	->4	
							Partial Cut Mode	->5	
							Default Cut Mode	->6	
					Auto Cut Settings	->3	AUTO CUT SETTINGS: No use this function		
							Back To Last Menu	->1	
							Cut paper when cover is closed	->2	
							No cut paper when cover is closed	->3	
							Cut paper when power on	->4	
							No cut paper when power on	->5	
							Disable	->6	
			Buzzer	->4	BUZZER: Normal Volume				
					Back To Last Menu	->1			
					Low Volume	->2			
					Normal Volume	->3			
					High Volume	->4			
					Higher Volume	->5			
					Highest Volume	->6			
					Disabled	->7			
			Power Supply	->5	POWER SUPPLY: Normal				
					Back To Last Menu	->1			
					Normal	->2			
					Low Power Mode	->3			
	Print Settings	->5	PRINT SETTINGS						
			Back To Last Menu	->1					

		Darkness Settings	->2	DARKNESS SETTING: Normal		
				Back To Last Menu	->1	
				Low	->2	
				Normal	->3	
				High	->4	
				Extra High	->5	
		Paper Roll Width	->3	PAPER ROLL WIDTH:80.0mm		
				Back To Last Menu	->1	
				57.5mm	->2	
				69.5mm	->3	
				76.5mm	->4	
				80.0mm	->5	
				82.5mm	->6	
		Left Margin	->4	LEFT MARGIN:7mm		
				Back To Last Menu	->1	
				0mm	->2	
				1mm	->3	
				3mm	->4	
				5mm	->5	
				7mm	->6	
				9mm	->7	
		Right Margin	->5	RIGHT MARGIN:9mm		
				Back To Last Menu	->1	
				0mm	->2	
				1mm	->3	
				3mm	->4	
				5mm	->5	
				7mm	->6	
				9mm	->7	
		CR Command	->6	CR COMMAND: Disable		
				Back To Last Menu	->1	
				Enable	->2	
				Disable	->3	
		Code Page	->7	CODE PAGE SETTING		
				Back To Last Menu	->1	
				Print all codepages	->2	
				Select a codepage	->3	
		Save Paper Level	->8	SAVE PAPER LEVEL		
				Back To Last Menu	->1	
				Disable	->2	
				25%	->3	
				50%	->4	
				75%	->5	
				100%	->6	

		Two-color Verify	->9				
		Gray Bmp Verify	->10				
	Paper Sensor Settings	->6	PAPER NEAR END SETTINGS				
		Back To Last Menu	->1				
		Paper Low Alarm	->2	PAPER LOW ALARM: Enable			
				Back To Last Menu	->1		
				Enable	->2		
				Disable	->3		
		Stop Print When PAPER Low	->3	STOP PRINT WHEN PAPER LOW: Disable			
				Back To Last Menu	->1		
				Enable	->2		
				Disable	->3		
		Paper Near End Sensor	->4	PAPER NEAR END SENSER: Enabled			
				Back To Last Menu	->1		
				Enable	->2		
				Disable	->3		
	Set Default Config	->7	SET DEFAULT CONFIGURATION				
		Back To Last Menu	->1				
		Set Printer To Default Configuration	->2				
	FONTA/FONTB Settings	->8	Current Font:FONTA				
		Back To Last Menu	->1				
		Select FONTA	->2				
		Select FONTB	->3				
		Select UDFONTA	->4				
		Select UDFONTB	->5				
	Beep settings	->9	Beep settings:Disabled				
		Back To Last Menu	->1				
		Enable External Herald	->2				
		Enable Internal buzzer	->3	BEEP MODE			
				Back To Last Menu	->1		
				Mode 1	->2		
				Mode 2	->3		
				Mode 3	->4		
				Mode 4	->5		
				Mode 5	->6		
				Mode6	->7		
		All Beep disabled	->4				

		Set Printer Mode	->10	Printer Mode: Default Printer Mode			
				Back To Last Menu	->1		
				Default Printer Mode	->2		
				BTP-2002NP Mode	->3		
		Enter code,then hold Button Down at least 1 second to validate					
Sensor Test	->4	Sensor Test Mode: ERROR LED state will change according to sensor state To EXIT,hold button down at least 1 second					
Cutter Test	->5						
Print Statistics	->6	BTP-R880NPII STATISTICS					
		TCUT	:0				
		TLFS	:0				
		ONTIME	:0				
Calibration	->7						
Ethernet Configuration	->8	Ethernet CONFIGURATION					
		Exit Without Save	->1				
		Exit With Save	->2	Saving config, please wait. Configurations have been saved, please repower the printer			
		Reset Ethernet Config	->3				
		Print Settings	->4	IP Address: MAC Address: SUBNET Mask: GATEWAY: Print Port:			